

ABSTRACT

A method and medium tangibly embodying the method of constructing a lookup table of modes for encoding data for transmission in a wireless communication channel from a transmit unit to a receive unit by using at least one quality parameter of the data and its first-order and second-order statistical parameters to arrange the modes in the lookup table. The first-order and second-order statistical parameters can be determined from a simulation of the wireless communication channel or from field measurements of the wireless communication channel. The modes in the lookup table are ordered by a target value of a communication parameter such as PER, BER, data capacity, signal quality, spectral efficiency, throughput or another suitable communication parameter set to achieve a desired quality of service. The quality parameter selected is conveniently a short-term quality parameter such as signal-to-interference and noise ratio (SINR), signal-to-noise ratio (SNR) or power level. During use adjustments depending on the instantaneous condition of the channel can be used to tune the lookup table.